

WHAT IS CLAIMED IS:

1. A shift control system for use with a V-belt type continuously variable transmission for a vehicle in which a V-belt is wound between a primary pulley of an input side connected to an engine and a secondary pulley of an output side, a primary pulley pressure acting on the primary pulley and a secondary pulley pressure acting on the secondary pulley are generated respectively by using a line pressure as an original pressure, and a shift actuator is operated to an operating position corresponding to a target gear ratio, whereby a differential pressure is generated between the primary pulley pressure and the secondary pulley pressure to change widths of V-shaped grooves of the primary pulley and the secondary pulley so that an actual gear ratio that is obtained from speed ratio of the primary pulley and the secondary pulley becomes equal to the target gear ratio, comprising:

shift control means for controlling the shift actuator;
speed detecting means for detecting a speed of the vehicle;

downshift detecting means for detecting a downshift of the belt-type continuously variable transmission, and

idle state detecting means for detecting an idle state of the engine,

wherein when a speed detected by the speed detecting means is less than a first predetermined speed, the downshift detecting means detects the downshift, and the idle state detecting means does not detect the idle state of the engine, the shift control means limits an operating speed of the shift actuator.

2. A shift control system for use with a V-belt type continuously variable transmission according to claim 1,

wherein an intermediate target gear ratio is set between the actual target gear ratio and the target gear ratio, the intermediate target gear ratio being gradually brought close to the target gear ratio,

the shift control means controls the shift actuator so that the actual gear ratio reaches the intermediate target gear ratio, and

the downshift detecting means detects the downshift when there is a difference more than a predetermined value between the intermediate target gear ratio and the actual gear ratio.

3. A shift control system for use with a V-belt type continuously variable transmission according to claim 1 or 2,

wherein the shift control means lowers an operating speed of the shift actuator when a speed detected by the speed detecting means is less than an upshift determination vehicle speed.

4. A shift control system for use with a V-belt type continuously variable transmission according to one of claim 1 or 2, further comprising:

gear ratio comparing means for comparing the actual gear ratio and the target gear ratio,

wherein when the speed detected by the speed detecting means is equal to or more than the second predetermined speed, the downshift detecting means detects a finish of the downshift, and the gear ratio comparing means determines that the actual gear ratio is closer to a Lo side relative to the target gear

ratio, the shift control means finishes limitation of the operating speed of the shift actuator.

5. A shift control system for use with a V-belt type continuously variable transmission according to one of claim 3, further comprising:

gear ratio comparing means for comparing the actual gear ratio and the target gear ratio,

wherein when the speed detected by the speed detecting means is equal to or more than the second predetermined speed, the downshift detecting means detects a finish of the downshift, and the gear ratio comparing means determines that the actual gear ratio is closer to a Lo side relative to the target gear ratio, the shift control means finishes limitation of the operating speed of the shift actuator.